

AMENDMENTS TO THE CLAIMS

1. (Currently amended) ~~Self-tapping~~ A self-tapping implant ~~(11, 12)~~ for use in a bone, preferably a jawbone, ~~and the implant~~ comprising:

a body ~~(15)~~ with plural threads ~~(11, 16-17)~~ arranged thereon;

a conically tapering portion ~~(12)~~ arranged at its a front end of the body; and having one or more ~~spaces or bone-chip recesses (4, 5, 6) therein~~ which accommodate bone material cut off during a tapping operation ~~and which are~~,

said one or more bone-chip recesses being formed by removal of material from the plural threads and body ~~in question~~,

wherein, at least in the conically tapering portion, the plural threads are materially ~~reduced, each of the materially reduced thread (e.g. 11) having~~ threads having a cutting edge ~~(1a, 2a, 3a)~~ which extends ~~inwards inward~~ from the an outer edge of the a respective remaining thread part ~~and which cooperates~~,

said respective remaining thread part cooperatively engaging with the bone during the tapping operation, ~~characterized in that~~

wherein each cutting edge of a number, ~~preferably all, of the associated~~ cutting edges of the materially reduced threads have a pointed shape ~~(1b, 2b, 3b)~~ which, in the a cross section ~~thereof of the thread in question~~, essentially follows a line which deviates from a first radius (r) through a point of the pointed shape of the respective remaining thread part's part, front portion or the pointed shape's point; that the

wherein a cutting edge (1a, 2a, 3a) on a first remaining thread part (1, 2, 3) merges via a second radius (r') ~~or curved part~~ into a rear edge ~~(e.g. 2d)~~ on a second remaining thread part;

~~which is arranged before the first thread part in the direction of screwing (7), an implant screwing direction,~~

~~said cutting edge on the first remaining part being selected to provide for the purpose of providing an effective threading characteristic related with respect to the a desired strength of the implant, that~~

~~wherein a cutting angle or chip angle ( $\alpha$ ), formed by the pointed shape (1b, 2b, 3b) is chosen selected to be within a range of between 15-40° that,~~

~~wherein each of plural thread relief or relief edge (2c, 3c) edges effected by a respective one of the materially reduced thread part parts is arranged essentially in the conically tapering portion and behind, as viewed in the implant screwing direction of screwing,~~

92 ~~wherein each full radius part (2c, 3c) which can be full radius portions of the plural threads within the conically tapering portion are engaged with the bone, for the purpose of facilitating the to provide a threading relief function of threading and that it has double or during the tapping operation,~~

~~wherein the self-tapping implant comprises multiple threads along all or part of its at least a portion of a length thereof.~~

2. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 1,  
~~characterized in that~~ wherein the cutting angle or chip angle ( $\alpha$ ) is about 20°.

3. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 1,  
~~characterized in that~~ wherein the conically tapering portion is arranged with materially reduced thread parts with full radius and which are at least two in number.

4. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 1, wherein ~~the point angle of the cone-shaped portion~~ the cutting angle is less than 20°.

5. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 1, wherein each relief edge ~~consists of~~ comprises two essentially plane relief surfaces which form an obtuse angle with respect to each other.

B2 6. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 1, wherein a first portion is provided with ~~a double or multiple thread~~ threads, and a second portion is provided with a single thread or thread numbering different from ~~the~~ a thread numbering of the first portion, ~~or vice versa~~.

7. (Currently amended) ~~Implant (11,12)~~ A self-tapping implant for a bone, preferably a jawbone, ~~and the implant~~ comprising:

a body (15) with plural threads (11, 16-17) arranged thereon;

a conically tapering portion (12) arranged at its a front end of the body, and having one or more ~~spaces or~~ bone-chip recesses (4, 5, 6) which accommodate bone material cut off during a tapping operation and which are formed by removal of material from the threads and body in question,

wherein, at least in the conically tapering portion, the plural threads are materially reduced, each materially reduced thread (e.g. 11) having a cutting edge (1a, 2a, 3a) which extends

inwards from ~~the an~~ outer edge of ~~the a~~ respective remaining thread part and which ~~cooperates~~  
cooperatively engages with the bone during the tapping operation, ~~and in that~~

wherein each cutting edge of a number, ~~preferably all, of the cutting edges~~ of the  
 materially reduced threads ~~have~~ has a pointed shape (1b, 2b, 3b) which, in ~~the a~~ cross section of  
~~the thread in question thereof~~, essentially follows a line which deviates from a first radius ( $r$ )  
 through ~~the a~~ remaining thread ~~part's part~~ front portion ~~or the pointed shape's point~~,  
 characterized ~~in that the~~

wherein cutting edges (1a, 2a, 3a) ~~in question comprises of the plural threads comprise a~~  
 straight part extending from the pointed shape of the cutting edge ~~which,~~

wherein a straight part on a first remaining thread part (1, 2, 3) merges via a second  
 radius ( $r'$ ) ~~or curved part~~ into a straight rear edge (e.g. 2d) on a second remaining thread part,  
 which is arranged before the first thread part in ~~the a~~ direction of screwing (7), ~~and that of the~~  
implant.

wherein the second radius ( $r'$ ) ~~or the curved part (10)~~ is arranged to provide  
~~optimum~~ optimize a remaining material in the body and remaining thread parts and,  
 consequently, ~~optimum a holding~~ strength of the self-tapping implant ~~part in question~~.

8. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 2,  
~~characterized in that wherein~~ the conically tapering portion is arranged with materially reduced  
 thread parts ~~with having~~ full radius and which are at least two in number.

9. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 2,  
 wherein the ~~point angle of the cone shaped portion cutting angle~~ is less than 20°.

10. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 3, wherein the ~~point angle of the cone-shaped portion~~ cutting angle is less than 20°.

11. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 2, wherein each relief edge ~~consists of~~ comprises two essentially plane relief surfaces which form an obtuse angle with respect to each other.

P2 12. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 3, wherein each relief edge ~~consists of~~ comprises two essentially plane relief surfaces which form an obtuse angle with respect to each other.

13. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 4, wherein each relief edge ~~consists of~~ comprises two essentially plane relief surfaces which form an obtuse angle with respect to each other.

14. (Currently amended) ~~Implant according to~~ The self-tapping implant of claim 2, wherein a first portion is provided with a ~~double or~~ multiple thread, and a second portion is provided with a single thread or thread numbering different from ~~the a~~ thread numbering of the first portion, ~~or vice versa~~.

15. (Currently amended) ~~Implant according to The self-tapping implant of claim 3,~~  
wherein a first portion is provided with a ~~double or multiple~~ thread, and a second portion is  
provided with a single thread or thread numbering different from ~~the a~~ thread numbering of the  
first portion, ~~or vice versa~~.

B2 16. (Currently amended) ~~Implant according to The self-tapping implant of claim 4,~~  
wherein a first portion is provided with a ~~double or multiple~~ thread, and a second portion is  
provided with a single thread or thread numbering different from ~~the a~~ thread numbering of the  
first portion, ~~or vice versa~~.

17. (Currently amended) ~~Implant according to The self-tapping implant of claim 5,~~  
wherein a first portion is provided with a ~~double or multiple~~ thread, and a second portion is  
provided with a single thread or thread numbering different from ~~the a~~ thread numbering of the  
first portion, ~~or vice versa~~.

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